

REMARKS

This Amendment is responsive to the non-final Office Action dated July 25, 2005. Applicants have amended claims 5, 22, 30, and 31 to correct minor typographical errors. Claims 1-43 remain pending.

Allowable Subject Matter

In the Office Action, the Examiner indicated that claims 5-8, 17-20, 22, 30-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections Under 35 U.S.C. § 103

In the Office Action, the Examiner:

- (a) rejected claims 1, 4, 5, 9, 10, 26, 29, 30, 34, 35, 41, 43 under 35 U.S.C. 103(a) as being unpatentable over Elaine Weinmann et al. (Photoshop for Windows), referred to by the Examiner as "Elaine," in view of Yoo (USPN 6,185,005);
- (b) rejected claims 13 and 38 under 35 U.S.C. 103(a) as being unpatentable over Elaine in view of Yoo and further in view of Berger (Why do Images Appear Darker on Some Displays? An Explanation of Monitor Gamma);
- (c) rejected claims 2, 3, 27, and 28 under 35 U.S.C. 103(a) as being unpatentable over Elaine in view of Yoo and further in view of Seegers et al. (USPN 6,439,722);
- (d) rejected claims 15, 16, 21, 23, 24, and 42 under 35 U.S.C. 103(a) as being unpatentable over Seegers et al. in view of Elaine and Yoo;
- (e) rejected claim 25 under 35 U.S.C. 103(a) as being unpatentable over Seegers et al., Elaine and Yoo and further in view of Berger;
- (f) rejected claims 11, 12, 36 and 37 under 35 U.S.C. 103(a) as being unpatentable over Elaine and Yoo and further in view of Seegers et al.; and
- (g) rejected claims 14 and 39-40 under 35 U.S.C. 103(a) as being unpatentable over Elaine and Yoo in view of Graf et al.. (USPN 6,349,300).

Applicants respectfully traverse the various rejections under section 103. The applied references, taken alone or in combination, fail to disclose or suggest the requirements of Applicant's claims. Moreover, the references provide no teaching that would suggested the desirability of the modifications necessary to arrive at the claimed inventions.

For example, none of the applied references discloses or suggests a method comprising estimating an initial gamma for a display device based on selection of a displayed green element that appears to most closely blend with a dithered green background, characterizing overall gamma for red, blue, and green channels of the display device based on the estimated initial gamma, and modifying the overall gamma based on a gray balance evaluation for the red and blue color channels, as required by claims 1-14, 26-41 and 43.

In addition, contrary to the requirements of claims 15-25 and 42, the applied references also fail to suggest a system comprising a web server to transmit web pages to clients residing on a computer network, a color image server to transmit color images referenced by the web pages to the clients for display on display devices associated with the clients, a color profile server to guide the clients through a color profiling process and obtain information characterizing the color responses of the display devices, and one or more color correction modules to modify the color images transmitted by the color image server based on the information to improve the accuracy of the color images when displayed on the respective display device. More particularly, the references provide no teaching that would have suggested obtaining characterization information including an initial gamma for the display device, the initial gamma being determined based on selection of a display green element that appears to most closely blend with a dithered green background, and an overall gamma for red, blue, and green channels of the display device determined from the initial gamma, wherein the overall gamma is modified based on a gray balance evaluation for the red and blue color channels.

For conciseness and brevity, Applicants will focus on the deficiencies in each of the particular references applied by the Examiner. Applicants understand that each rejection under section 103 relies on a combination of two or more references, but notes that such a combination clearly fails to support a prima facie case of obviousness if either reference does not actually provide the teaching for which it is cited.

Elaine

Every rejection in the Office Action was based in part on the “Elaine” reference. With respect to the rejection of claims 1, 4, 5, 9, 10, 26, 29, 30, 34, 35, 41 and 43, for example, the Examiner characterized Elaine as disclosing estimation of an initial gamma for a display device based on selection of a displayed green element that appears to most closely blend with a green background. For this teaching, the Examiner pointed to Fig. 9 at page 256, Fig. 2 at page 252 and Fig. 2 at page 111 of the Elaine reference. The Examiner further characterized Elaine as disclosing the characterization of overall gamma for red, blue, and green channels of the display device based on the estimated initial gamma, again citing Fig. 9 at page 256. Finally, the Examiner stated that Elaine teaches modification of the overall gamma based on a gray balance evaluation for the red and blue color channels, citing Fig. 9 at page 256 and Fig. 2 at page 111.

The Examiner’s interpretation of Elaine is incorrect. Elaine describes none of the features attributed to it by the Examiner. In the section at page 256 entitled “Adjust the Gamma,” Elaine describes a “Calibrate” process by which the user adjusts the display device to achieve a desired gamma. In the section at page 252 entitled “General Preferences,” Elaine describes the selection of color and painting tool characteristics for use in creating or editing an image. In the section at page 111 entitled “Choose Colors,” Elaine describes the selection of colors from a color picker palette for use with a fill command or a painting tool.

None of the above sections of Elaine describes gamma estimation or gray balance evaluation, as claimed, much less modification of overall gamma for red, green and blue channels of a display device based on a gray balance evaluation for red and blue color channels, as set forth in Applicants claims. Elaine makes no mention of the estimation of an initial gamma for a display device based on selection of a displayed green element that appears to most closely blend with a dithered green background.

Most of the sections of the Elaine reference identified by the Examiner relate to user selection of color characteristics for creation and editing of images, e.g., using various color palettes. The “Adjust the Gamma” section at page 256 of Elaine describes gamma adjustment by calibration of a display device to achieve a desired gamma. Hence, Elaine describes adjustment of display settings to achieve a desired gamma, rather than characterization of a display device to estimate gamma or evaluate gray balance.

At page 256, Fig. 9, as discussed above, the Elaine reference describes steps for actively adjusting a display device by way of a monitor setup menu. In particular, the Photoshop user adjusts the overall display device gamma by actuating a slider bar (Fig. 9). Then, upon clicking the "balance button," the Photoshop user adjusts individual slider bars for the red, green and blue channels to achieve a neutral gray in the calibration squares (Fig. 9).

This portion of the Elaine reference does not describe estimating an initial gamma for a display device based on selection of a displayed green element that appears to most closely blend with a dithered green background, characterization of overall gamma for red, blue, and green channels of the display device based on the estimated initial gamma, or modification of overall gamma based on a gray balance evaluation for the red and blue channels, as claimed. Instead, Elaine simply describes a control panel in Photoshop for calibrating display characteristics to produce a desired gamma and balance.

At page 111, Fig. 2, Elaine describes selection of foreground and background colors from a color picker palette. Hence, this portion of the Elaine reference seems to have little to do with estimating an initial gamma for a display device based on selection of a displayed green element that appears to most closely blend with a dithered green background, as claimed. Also, the selection of foreground and background colors seems to be irrelevant to the requirement that overall gamma is modified based on a gray balance evaluation for red and blue channels, as claimed. Without any explanation by the Examiner, Applicant is unable to find a relationship between this section of the Elaine reference and the requirements of Applicants' claims.

At page 252, Fig. 2, Elaine describes the Photoshop Color Picker, which enables a user to generate colors. This aspect of Photoshop does not appear to relate to the requirements of Appellant's claimed invention. On page 252, Elaine describes the manner in which the Photoshop user may select colors, interpolation techniques, painting tool features, and other characteristics. This section of Elaine provides no teaching relevant to the estimation of an initial gamma for a display device based on selection of a displayed green element that appears to most closely blend with a dithered green background, as claimed.

Again, in the passages cited by the Examiner, Elaine appears to describe techniques for picking colors to form an image, or adjusting the overall gamma or gray balance of a

display device, but does not contemplate estimation of an initial gamma for a display device based on selection of a displayed green element that appears to most closely blend with a dithered green background, characterization of overall gamma for red, blue, and green channels of the display device based on the estimated initial gamma, and modification of the overall gamma based on a gray balance evaluation for the red and blue color channels, as claimed.

For each of the reasons advanced above, the Elaine reference fails to disclose or suggest the features set forth in the claims, either alone or in combination with Yoo, Seegers et al., or any other reference, and therefore does not support a prima facie case of obviousness with respect to the claimed invention. Therefore, any rejection based on Elaine is improper and must be withdrawn.

Yoo

The Examiner acknowledged that Elaine does not disclose estimation of an initial gamma for a display device based on selection of a displayed green element that appears to most closely blend with a dithered green background. However, the Examiner cited Yoo as teaching the use of a dithered background, at Col. 1, lines 19-21. The Examiner then concluded that it would have been obvious to modify the system described by Elaine according to Yoo "in order to allow automatic gamma correction," citing Col. 3, lines 11-14 of Yoo.

Applicants disagree with the Examiner's conclusion of obviousness based on Yoo. Again, Elaine does not even disclose estimation of an initial gamma based on selection of a green element that appears to most closely blend with a green background. Therefore, even if Yoo disclosed the use of a dithered background, such a teaching would not overcome the basic deficiencies already evident in Elaine.

In addition to the problems with Elaine, however, Yoo is also deficient. Yoo makes no mention of the use of a dithered background for gamma estimation. Rather, in the cited passage, Yoo merely describes conventional halftoning. Specifically, Yoo states that "[o]ne standard method of converting gray or hue concentration level image data into binary level pixel image data is through the use of dithering or halftoning process."

In describing dithering and halftoning, Yoo does not refer to estimation of the gamma of a display device. The fact that dithering or halftoning is used to present continuous tone image data says nothing about the use of a dithered green background for initial gamma estimation. In addition, although Yoo describes, as an object of the invention, the provision of automatic gamma correction in a halftoning system, there appears to be no nexus between halftoning per se and the ability to provide automatic gamma correction. Therefore, the motivation suggested by the Examiner for modification of Elaine is unfounded. In view of the deficiencies in the Yoo reference, relative to the claimed invention, any rejection based on Yoo is improper and must be withdrawn.

Seegers et al.

The Examiner characterized Seegers et al. as disclosing a system with a web server to transmit web pages, a color image server to transmit color images referenced by the web pages, a color profile server to guide clients through a color profiling process, and color correction modules to modify color images to improve the accuracy of displayed color images. The Examiner acknowledged that Seegers et al. fails to disclose determination of an initial gamma based on selection of a displayed green element that appears to most closely blend with a green dithered background, and an overall gamma for red, blue, and green channels of the display device determined from the initial gamma, wherein the overall gamma is modified based on a gray balance evaluation for the red and blue color channels.

However, the Examiner cited Elaine and Yoo as teaching such features. As already discussed above, Elaine and Yoo fail to provide the teachings attributed to them by the Examiner. Moreover, as acknowledged by the Examiner, Seegers et al. provides no additional teaching sufficient to overcome the deficiencies in Elaine and Yoo, as described above. Therefore, any rejection based on Elaine, Yoo or Seegers et al. is improper and must be withdrawn.

Berger

The Examiner acknowledged that Seegers et al., Elaine and Yoo do not disclose the requirement of a dithered green background that is dithered approximately 33%, but cited Berger. Aside from providing no teaching sufficient to overcome the basic deficiencies of

Seegers et al., Elaine and Yoo, Berger also does not disclose or suggest the use of a dithered green background representing a gray level of approximately 33%. The Examiner stated that Berger shows dithered elements with gray levels of 25% and 50%. However, in Berger, the dithered elements with the noted gray levels are not used for gamma estimation.

Rather, Berger presents dithered elements with gray levels of 25%, 50% and 75% to illustrate how dithering can be used to approximate the appearance of a continuous tone element, and the effect of gamma correction on the approximation. In particular, Berger presented the dithered elements adjacent continuous tone elements with actual intensity levels of 25%, 50% or 75% to show how dithering approximates continuous tone intensity. There is simply no mention in Berger of a dithered green background that is dithered at approximately 33%, as claimed. Therefore, any rejection based on Berger is improper and must be withdrawn.

Graf

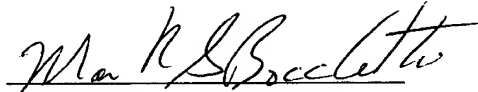
The Examiner cited Graf as teaching guiding a client through the process of obtaining the estimated gamma by delivering one or more instructional web pages to the client. The Examiner pointed to Col. 6, lines 29-58, of Graf, as providing such a teaching. The Examiner's interpretation of Graf is incorrect. In the cited passages, Graf does not describe gamma estimation or delivery of instructional web pages to obtain a gamma estimation. Instead, Graf describes a process for selecting product colors. The user slides a bar along a spectrum to view available product colors closest to the point on the spectrum. Graf makes no mention of gamma estimation or color characterization of a display device. Therefore, any rejection based on Graf is improper and must be withdrawn.

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CONCLUSION

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 05-0225. The Examiner is invited to telephone the below-signed attorney to discuss this application.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Mark G. Bocchetti", is written over a horizontal line.

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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.